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HARNES, DICKEY & PIERCE P.L.C.			NGUYEN, LINH V	
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SUITE 400			PAPER NUMBER	
TROY, MI 48098			2819	

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/759,173	Applicant(s) CUI ET AL.	
	Examiner Linh V. Nguyen	Art Unit 2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15 is/are allowed.
- 6) ☐ Claim(s) 16-18, 22, 24-31, 36-44 is/are rejected.
- 7) ☒ Claim(s) 19, 20, 21, 23, and 32 - 35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to applicant's communication filed on 3/2/06.

Claims 16, 29 and 39 have been amended. Claims 45 – 79 have been canceled. Claims 1 – 44 are pending on this application.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Response to Arguments

3. Applicant's arguments with respect to amended claims 16, 29, and 39 have been considered, but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 16, 17, 22, 24, 25, 26, 29 – 31, 37, 39 – 41, 42 and 43 rejected under 35 U.S.C. 102(e) as being anticipated by Sobel U.S. patent No. 6,570,448.

Regarding claim 16, Fig. 4 [404] and Fig. 6 of Wiese et al. discloses an electrical circuit, comprising: an amplifier (404), comprising: an input circuit (602, 604) in communication with an input of the amplifier (V_{g+} , V_{g-}); a start-up circuit (610, 608) in communication with the input circuit (602, 601), wherein the start-up circuit (601, 608) is configured to generate a start-up signal (output signals of 610 and 608 when 610 and 608 turn on) to enable subsequent operation of the amplifier (404) and the startup circuit (608, 610) turns off when an output (V_{o+} , V_{o-}) of the amplifier (404) reaches a threshold voltage (Col. 9 lines 5 – 19); and an output circuit (604, 603) in communication with an output (V_{o+} , V_{o-}) of the amplifier (404) and in communication with the input circuit (602, 601) and the start-up circuit (610, 608).

Regarding claim 17, wherein the amplifier comprises a differential amplifier (602, 601), wherein the input of the amplifier comprises a differential input (V_{g+} , V_{g-}), and wherein the output of the amplifier comprises a differential output (V_{o+} , V_{o-}).

Regarding claim 22, wherein the amplifier (404) further comprises: a common mode feedback circuit (V_{cmsrc}) in communication with the output (Col. 9 lines 10 – 16) and second and third current sources (V_{b1} , V_{b2}), wherein the second and third current sources are in communication with the input (602, 601) and start-up circuit (610, 608).

Regarding claim 24, wherein the amplifier further comprises, fourth and fifth current sources (V_{b4} , V_{cmfb}) in communication with the input (602, 601) and sixth and

seven current sources (V_{b5} , V_{b5}) in communication with the output (V_{o+} , V_{o-}) and the output circuit (604, 603).

Regarding claim 25, wherein the start up circuit cease generation of the start up signal when the operation of the amplifier reaches steady state (Col. 9 lines 5 – 19).

Regarding claim 26, wherein the amplifier comprises a fully differential operational amplifier (404).

Regarding claim 29, the claim incorporated similar subject matter as of claim 16, and rejected along the same rationale.

Regarding claim 30, wherein the amplifier means (404) comprises a differential amplifier means (602, 601), wherein the input means (V_{g+} , V_{g-}) of the amplifier means comprises a differential input means (V_{g+} , V_{g-}), and wherein the output means (604, 605) of the amplifier means comprises a differential output means (V_{o+} , V_{o-}).

Regarding claim 31, wherein the input circuit (602, 601) means comprises: first and second input amplifier means (602,601), wherein each of the first and second input amplifier means (602,601) includes first, second and third electrode means (gate, drain source), wherein the first electrode means (gates) of the first and second input amplifier means (601,602) are in communication with the input means (V_{g+} , V_{g-}), and wherein the second electrode means (sources) of the first and second input amplifier means (602, 601) are in communication with each other and a first current source means (V_{b2}).

Regarding claim 37, wherein the start up circuit cease generation of the start up signal when the operation of the amplifier reaches steady state (Col. 9 lines 5 – 19).

Regarding claim 39, the claim incorporate the same subject matter as of claims 1 and 29 above, and rejected along the same rationale.

Regarding claim 40, wherein the amplifier comprises a differential amplifier (404) wherein an input of the amplifier comprises a differential input (V_{g+} , V_{g-}), and wherein the output of the amplifier comprises a differential output (V_{o+} , V_{o-}).

Regarding claim 41, Fig. 6 further comprising the steps of: comparing (606) a feedback signal (V_{cmsrc}) from the output with a predetermined reference signal (V_{ref}) to generate a comparison signal (V_{cmp}); and controlling an output level of the output signal (V_{o+} , V_{o-}) of the amplifier (404) using the comparison signal (V_{comp}).

Regarding claim 42, applying the output signal to an input of amplifier; to an input of the amplifier; and operating the amplifier in steady state (col. 9 lines 10 – 13).

Regarding claim 43, wherein the start up circuit cease generation of the start up signal when the operation of the amplifier reaches steady state (Col. 9 lines 5 – 19).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sobel al. as applied to claim 16 above.

Regarding claim 18, Fig. 6 of Sobel further discloses wherein the input circuit comprises: a first input transistor (602); and a second input transistor (601), wherein base electrodes of the first and second input transistors are in communication with the input (V_{g+} , V_{g-}), and wherein source electrodes of the first and second input transistors are in communication with each other and a first current source (V_{b2}); and wherein drain electrodes of the first and second start up transistors (610, 608) are in communication with drain electrodes of first and second input transistors (602, 601). However, the input circuit and the start up circuit of Sobel are implemented in MOS transistor technology instead of bipolar transistor technology.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have MOS amplifier of Sobel implemented in bipolar amplifier since the examiner takes Office Notice to the equivalence of MOS transistor and bipolar transistor for their use in the amplifier art and the selection of any of these know equivalent to implement amplifier device would be within the level of ordinary skill in the art.

8. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sobel al. as applied to claim 17 above, Moloudi et al. U.S. patent No. 6, 417,737.

Sobel as applied to claim 17 above, does not discloses wherein the amplifier comprises a Gm cell.

Fig. 4 of Moloudi et al. discloses a differential amplifier comprises a Gm cell (Col. 11 lines 43 – 44).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have amplifier comprising Gm cell, since Gm cell in the amplifier transistor is a well know and conventional in the art as indicated by Moloudi et al.

9. Claim 28, 38 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sobel as applied to claims 16, 29 and 39 above, in view of Moloudi et al. U.S. patent No. 6, 417,737.

Wiese et al. as applied to claims 16 and 29 above, does not disclose does not disclose wherein the method is compliant with a standard selected from the group consisting of 802.11, 802.11a, 802.11b, 802.11g and 802.11i.

Fig. 6 of Moloudi et al. discloses an amplifier system is compliant with a standard selected from the group consisting of 802.11, 802.11a, 802.11b, 802.11g and 802.11i (Col. 6 lines 35 – 37).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a system of Sobel to compliant with IEEE 801.11 standard as taught by Moloudi, since every electrical system for using or selling must be compliant with standard regulation.

Allowable Subject Matter

10. Claims 19, 20, 21, 23, and 32 - 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 19, prior art fails to disclose wherein emitter electrodes of the first and second start-up transistors are in communication with each other and with a first current source , and wherein collector electrodes of the first and second start-up transistor are in communication with collector electrodes of first and second input transistors respectively.

Regarding claim 20, in addition to other elements in the claim, the prior art does not teach or suggest wherein the output circuit comprises: wherein emitter electrodes of the first and second output transistors are in communication with each other and with a first current source, wherein collector electrodes of the first and second output transistors are in communication with the first and second impedance circuits, respectively, and the output.

With respect to claim 23, in addition to other elements in the claim, the prior art does not teach or suggest wherein the common-mode feedback circuit comprises: first and second resistors in communication with the output and an input of the comparator.

With respect of claim 32, in addition to other elements in the claim, the prior art does not teach, wherein the second electrode means of the first and second start-up amplifier means are in communication with each other and with a first current source means , and wherein the third electrode means of the first and second start-up amplifier means are in communication with third electrode means of first and second input amplifier means respectively.

With respect to claim 33, in addition to other elements in the claim, the prior art does not teach or suggest wherein the output circuit means first and second output

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amplifier means, comprises: third electrode means of first and second input amplifier means, respectively, wherein the second electrode means of the first and second output amplifier means are in communication with each other and with a first current source means, and wherein the third electrode means of the first and second output amplifier means are in communication with the first and second impedance means, respectively, and the output means.

With respect to claim 34, the prior art does not disclose feedback means in communication with the output means and second and third current source means, wherein the second and third current source means are in communication with the input and start-up circuit means.

With respect to claim 35, in addition to other elements in the claim, the prior art does not teach or suggest wherein the feedback means comprises: and first and second resistive means in communication with the output means and an input of the comparator means.

11. Claims 1 – 15 are allowed.

With respect to claims 1 and 10, in addition to other elements in each claim, the prior art does not teach a first impedance circuit; and a second impedance circuit, wherein base electrodes of the first and second output transistors are in communication with the first and second impedance circuits, respectively, and the collector electrodes of the first and second input transistors, respectively, wherein emitter electrodes of the

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first and second output transistors are in communication with each other and with the first current source, and wherein collector electrodes of the first and second output transistors are respectively, and the communication with the first and second impedance circuits, differential output.

Prior Art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh Van Nguyen whose telephone number is (571) 272-1810. The examiner can normally be reached from 8:30 – 5:00 Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Rexford Barnie can be reached at (571) 272-7492. The fax phone numbers for the organization where this application or proceeding is assigned are (571-273-8300) for regular communications and (571-273-8300) for After Final communications.

5/5/06

Linh Van Nguyen



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